

REMARKS

Claims 1-37 are pending, with claims 6-9, 12-14, 18, 21-23 and 26-37 having been withdrawn. By this amendment, claims 1, 11, 15, 20, 24 and 25 are being amended, and new claims 38 and 39 are being added. Marked up version of the amended claims are attached hereto pursuant to 37 C.F.R. § 1.121(e)(ii). No new matter is involved.

In paragraph 2 on page 2 of the Office Action, claims 11 and 20 are objected to because of an antecedent basis problem. In response, Applicant is amending both claims to change "diver" to -- divider --, thereby clarifying such claims and providing clear antecedent basis. As so amended, such claims are submitted to be clear and definite.

In paragraph 4 on page 3 of the Office Action, claims 1-5, 10, 15-17 and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by Applicant's admitted prior art. In paragraph 5 on page 4 of the Office Action, claim 24 is rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,097,466 of Koma. Such rejections are respectfully traversed, particularly in view of the amendments being made herein.

In paragraph 6 on page 5 of the Office Action, claims 11 and 20 are indicated as being allowable if rewritten so as to overcome the rejection on formal grounds and so as to include all of the limitations of the base claim and any intervening claims. In the following paragraph 7 on page 5, claim 25 is also indicated as being allowable if rewritten in independent form. In response, claims 11, 20 and 25 are being amended to obviate the rejection on formal grounds in the case of claims 11 and 20 and to rewrite all three claims in independent form. As so amended, claims 11, 20 and 25 should now be allowable.

shielding film 32 (black matrix) and the drain line 50 in Figs. 2 and 3 are disposed

to overlap with the boundaries of the orientation directions of the liquid crystal which are formed by the orientation divider. It would therefore appear that the Examiner believes that the space region between adjacent pixel electrodes are also an orientation divider. Although the cross-sectional view of Fig. 1 shows a drain line 50 and an orientation control window 36 appearing to have an overlapping portion, Fig. 3 is a cross-sectional view along line D-D of Fig. 1 and there is no overlap between the drain line 50 and the orientation control window 36. However, the Applicant believes that there is a possibility that an orientation control window and a drain line 50 may partially intercept each other as in the Koma patent cited against claim 24.

In view of this, Applicant is amending claims 1 and 15 in order to clearly distinguish patentably over the admitted prior art. As so amended, claim 1 further defines the orientation divider thereof as "being provided in a space region between the pixel and an adjacent pixel and in a region other than the space region". The light-shielding film is further defined in terms of "overlapping the orientation divider in the region other than the space region along an extension direction of the orientation divider". Claim 15 has been amended in similar fashion. Therefore, claims 1 and 15 as so amended are submitted to clearly distinguish patentably over the art. Claims 2-10, 12-19 and 21-23 depend, directly or indirectly, from one of independent claims 1 and 15 and contain all of the limitations thereof, so as to also clearly distinguish patentably over the art.

Claims 24 clarifies that the orientation control window is provided on the side of the opposing electrode and the orientation control window is disposed to overlap the drain signal line on the side of the pixel electrode. However, as noted above, Koma discloses a structure wherein an orientation control window formed on an opposing electrode (common electrode) 32 partially intersects a drain line 50 on the

11. The Applicant believes that the Examiner's interpretation of the prior art is incorrect.

properly defined and it is noted that the drain line is disposed to overlap the orientation

region along the longitudinal direction of the extension region". More specifically, claim 24 as amended further recites "the orientation control windows include a region which extend in a predetermined direction and the drain signal lines are disposed to overlap the extension region along the longitudinal direction of the extension region". As so amended, claim 24 is submitted to clearly distinguish patentably over the art.

New claim 38 contains the limitations of claims 1 and 5. As such, it is similar to claim 24, but without a limitation of the orientation divider being an orientation control window. Such claim is submitted to clearly distinguish patentably over the art.

New claim 39 is similar to claim 1 but contains the further limitation "an orientation divider extending in a predetermined direction is provided on the side of the opposing substrate and a light-shielding film is disposed to overlap the divider along the extension direction of the divider". Such structure clearly distinguishes patentably over the admitted prior art and the Koma reference, so that new claim 39 is submitted to clearly distinguish patentably over the art.

In conclusion, claims 1-5, 10, 11, 15-17, 19, 20, 24 and 25 and new claims 38 and 39, are submitted to clearly to distinguish patentably over the art for the reasons discussed above. Therefore, reconsideration and allowance are respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 337-6846 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

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By: 

John P. Scherlacher  
Registration No. 23,009  
Attorney for Applicant(s)

Biltmore Tower  
500 South Grand Avenue, Suite 1900  
Los Angeles, CA 90071  
Telephone: (213) 337-6700  
Facsimile: (213) 337-6701

Version with markings to show changes made:

IN THE CLAIMS:

Rewrite claims 1 as follows:

1. (Amended) A liquid crystal display device for displaying by controlling the orientation of a liquid crystal by means of a plurality of pixel electrodes formed for each pixel and an opposing electrode disposed to oppose the plurality of pixel electrodes with the liquid crystal therebetween, comprising:

an orientation divider for dividing an orientation direction of the liquid crystal in a single pixel into a plurality of directions, the orientation divider being provided in a space region between the pixel and an adjacent pixel and in a region other than the space region; and

a light-shielding film which is disposed to overlap with boundaries of the orientation directions of the liquid crystal formed by the orientation divider, the light-shielding film overlapping the orientation divider in the region other than the space region along an extension direction of the orientation divider.

Rewrite claim 11 as follows:

11. (Amended) [A liquid crystal display device according to claim 10.] A liquid crystal display device for displaying by controlling the orientation of a liquid crystal by means of a plurality of pixel electrodes formed for each pixel and an opposing electrode disposed to oppose the plurality of pixel electrodes with the liquid crystal therebetween, comprising:

an orientation divider for dividing an orientation direction of the liquid crystal in a single pixel into a plurality of directions; and

a light-shielding film which is disposed to overlap with boundaries of

wherein the liquid crystal has a negative anisotropy of dielectric constant, and a vertical orientation film is formed to cover the pixel electrodes; and

wherein the orientation [diver] divider has a width different from that of the light-shielding film.

Rewrite claims 15 as follows:

15. (Amended) A liquid crystal display device for displaying by controlling the orientation of a liquid crystal by means of a plurality of pixel electrodes formed for each pixel and an opposing electrode disposed to oppose the plurality of pixel electrodes with the liquid crystal therebetween, comprising:

an orientation divider for dividing an orientation direction of the liquid crystal in a single pixel into a plurality of directions, the orientation divider being provided in a space region between the pixel and an adjacent pixel and in a region other than the space region; and

a light-shielding film which is disposed to overlap with boundaries of the orientation directions of the liquid crystal formed by the orientation divider, the light-shielding film being a conductive material, the light-shielding film overlapping the orientation divider in the region other than the space region along an extension direction of the orientation divider.

20. (Amended) [A liquid crystal display device according to claim 19,] A liquid crystal display device for displaying by controlling the orientation of a liquid crystal by means of a plurality of pixel electrodes formed for each pixel and an opposing electrode disposed to oppose the plurality of pixel electrodes with the liquid crystal therebetween, comprising:

an orientation divider for dividing an orientation direction of the liquid crystal in a single pixel into a plurality of directions; and

being a conductive material,

wherein the liquid crystal has a negative and anisotropy of dielectric constant, and a vertical orientation film is formed to cover the pixel electrodes;

wherein the orientation [diver] divider has a width different from that of the light-shielding film.

Rewrite claim 24 as follows:

24. (Amended) A liquid crystal display device, characterized in that:

liquid crystal is sealed between a first substrate and a second substrate which are disposed so as to oppose each other;

the first substrate has switching elements connected to gate signal lines and drain signal lines, pixel electrodes which are connected to the switching elements and made of a conductive material and a vertical orientation film for orienting the liquid crystal;

the second substrate has an opposing electrode which has orientation control windows at positions overlapping with the pixel electrodes to control the orientation of the liquid crystal and a vertical orientation film for orienting the liquid crystal; [and]

the drain signal lines are disposed on the first substrate at positions that overlap with the orientation control window[.]; and

the orientation control windows include a region which extends in a predetermined direction and the drain signal lines are disposed to overlap the extension region along the longitudinal direction of the extension region.

Rewrite claim 25 as follows:

25. (Amended) [A liquid crystal display device according to claim 24.] A liquid crystal display device, characterized in that:

liquid crystal is sealed between a first substrate and a second

the first substrate has switching elements connected to gate signal lines and drain signal lines, pixel electrodes which are connected to the switching elements and made of a conductive material and a vertical orientation film for orienting the liquid crystal;

the second substrate has an opposing electrode which has orientation control windows at positions overlapping with the pixel electrodes to control the orientation of the liquid crystal and a vertical orientation film for orienting the liquid crystal;

the drain signal lines are disposed on the first substrate at positions that overlap with the orientation control windows; and

wherein the orientation control window has a width different from that of the drain signal line overlapping with the orientation control window.